

MAXIMUS MVXT

EXPLOSION-PROOF, HIGH PERFORMANCE THERMAL ANALOG CAMERA



IP66/IP67
IP68/IP69

TYPE 4X
TYPE 6P

IP



- **Certifications for use in Zones 1 and 2, IIC T5 and T6 Group (Gas) and in Zones 21 and 22, IIIC T100°C and T85°C Group (Dust)**
- **Exceptional corrosion resistance**
- **Radiometry functions available only for IP versions**



CERTIFICATIONS



MAXIMUM RESISTANCE IN THE MOST CRITICAL ENVIRONMENTS

The explosion-proof camera MAXIMUS MVXT is perfect for efficient and preventive video surveillance and control of processes in hazardous environments where the atmosphere is potentially explosive due to the presence of inflammable gases or dust, typical of the Oil&Gas, marine or industrial sectors.

The housing is compact yet functional and is made entirely out of AISI 316L stainless steel. Its resistance to corrosion is not only guaranteed, but is also enhanced by way of polishing processes.

The extensive temperature range of certification, from -60°C to +65°C, with a sophisticated cold start system, offers the possibility of working in extreme environments.

An equally noteworthy point is that the IP66/IP68 ratings guarantee the complete protection against harsh weather and submersion in up to 5 metres of water for 2 hours. Moreover, the IP69 rating allows the device to be cleaned with high pressure water jets.

The MAXIMUS MVX series products are Lloyd's Register Type Approval System Test Specification Number 1 certified and therefore can be used in Marine and Offshore applications for environmental categories ENV1, ENV2, ENV3 and ENV5.

HIGH QUALITY IMAGE

IP-based cameras are also enhanced with radiometric functions that allow temperature detection based on the 4 central pixels of the image. Versions are available on request with advanced radiometry, capable of measuring the temperature of a specific object in any point of the image by defining a specific area.

MAXIMUS MVXT takes full advantage of all the functionalities and advantages offered by the thermal camera, including the possibility of sending an alarm and enabling immediate actions for the purpose of preventing undesired accidents or intrusions in the protected areas.

One striking advantage offered by these cameras is their extremely easy and secure "plug and play" installation, with multipolar wiring. These cameras arrive ready to use, avoiding the complex electrical connections that are typical of this type of device.

100% MADE IN VIDEOTEC

Videotec guarantees the extreme robustness and reliability of all its "all-in-one products" with hundreds of validation tests. Mechanics, electronics, positioning, networking, software and firmware are developed end-to-end by the internal Videotec team, with total know-how of all the network products offered.

At the heart of Videotec's product development is the concept of cyber-sustainability. To help customers protect their video surveillance systems and keep them secure, Videotec provides constant updates, training and support throughout the lifecycle of its products, regardless of how old the device is or whether it is still for sale.

Thanks to digitally signed firmware, password-restricted access, access control, centralised management of certificates and compliance with ONVIF Security Service specifications, Videotec guarantees that all its IP products will have the highest level of security during data transfer and device access.

MAXIMUS MVX therefore offers the Videotec warranty of being a reliable platform, that is cyber-safe, future-proof and easily integrated with third party products.

TECHNICAL DATA

GENERAL

AISI 316L stainless steel construction

External shot peened and electro-polished surfaces

Silicone O-ring seals

Configuration via OSM

MECHANICAL

Sunshield

Unit weight:

- 8.5kg (18.7lb) (housing with 4m (13ft) armoured multipolar cable)
- 12kg (26.5lb) (housing with 10m armoured multipolar cable)

CABLE GLANDS

Cable entry: 1 hole, 3/4", NPT

Cable gland Ex db 3/4"NPT and 4m/10m (13ft/33ft) preinstalled multipolar armoured cable or with 4m/10m (13ft/33ft) cable tail (for installation with conduit, conduit sealing fitting and conduit not included)

HOUSING'S WINDOW

Germanium window (big grid)

- Usable diameter: 57mm (2.2in)
- Thick: 10mm (0.4in)
- External treatment: antiscratch (Hard Carbon Coating - DLC)
- Internal treatment: antireflection
- Spectral range: from 7.5µm up to 14µm
- Medium transmittance (from 7.5µm up to 11.5µm): 87.3%
- Medium transmittance (from 11.5µm up to 14µm): 67.3%

Germanium window (small grid)

- Usable diameter: 40mm (1.6in)
- Thick: 8mm (0.3in)
- External treatment: antiscratch (Hard Carbon Coating - DLC)
- Internal treatment: antireflection
- Spectral range: from 7.5µm up to 14µm
- Medium transmittance (from 7.5µm up to 11.5µm): 87.5%
- Medium transmittance (from 11.5µm up to 14µm): 72.1%

ELECTRICAL

Supply voltage/Current consumption (heating switched on, Ton 15°C±3°C (59°F±5°F), Toff 22°C±3°C (72°F±5°F)):

- 24Vac ±10%, 2.2A, 50/60Hz
- 24Vdc ±5%, 2.2A
- 12Vdc ±5%, 3.5A

Armoured cable

- External diameter: 20.50 ± 0.50mm (0.02in)
- Diameter under armature: 16mm (0.63in)
- Colour: black RAL 9005

Armoured cable composition

- 3 x 2.5mm²
- 7 x 0.34mm²
- 4 x 2 x 0.20mm² (24AWG), category 5E
- 1 x coax 75 Ohm RG179 (analog version)

Cable tail composition

- 3 x 2.5mm², rated external diameter: 8.7mm (0.34in)
- 7 x 0.34mm², rated external diameter: 6.4mm (0.25in)
- 4 x 2 x 0.20mm² (24AWG), category 5E, rated external diameter: 6.7mm (0.26in)
- 1 x coax 75 Ohm RG59, rated external diameter: 4.9mm (0.19in) (analog version)

NETWORK

Only for the IP versions of the product:

Ethernet connection: 10BASE-T/100BASE-T

Connector: RJ45

Cable length: 100m max

CYBERSECURITY

Only for the IP versions of the product:

Digitally signed firmware

Password restricted access (HTTP digest)

Support of various user access levels

Control of accesses IEEE 802.1X

HTTPS cryptography using TLS1.0, TLS1.1, TLS1.2 and TLS1.3

Centralised certificate management

Complies with ONVIF Security Service specifications

SERIAL COMMUNICATIONS

Only for product analogue versions:

Serial interface

- RS-485 line, half-duplex
- Cable length: 1200m max
- Addressable units: 255 (configuration via OSM)

Serial communication protocol

- PANASONIC 850: 9600baud, 19200baud
- PELCO D: 2400baud, 9600baud
- MACRO: 9600baud, 38400baud

VIDEO

Only for the IP versions of the product:

Video encoder

- Communication protocol: ONVIF, Profile Q, Profile S and Profile T, ONVIF Thermal Service
- Device configuration: TCP/IPv4-IPv6, UDP/IPv4-IPv6, HTTP, HTTPS, NTP, DHCP, WSDISCOVERY, DSCP, IGMP (Multicast), SOAP, DNS
- Streaming: RTSP, RTCP, RTP/IPv4-IPv6, HTTP, Multicast
- Video compression: H.264/AVC, MJPEG, MPEG4, snapshot JPEG
- 3 independent video streams
- Image resolution: from 160x120pixel up to 720x480pixel in 5 steps
- Selectable frame rate from 1 to 30 images per second (fps)
- Web Server
- Motion Detection
- QoS: Differentiated DSCPs for streaming and device management
- SNMP and NTCIP protocols

I/O INTERFACE

I/O alarm board

- Alarm inputs: 1
- Relay outputs: 1 (1A, 30Vac/60Vdc max)

Cable length: 200m (656ft) max

ENVIRONMENT

For indoors and outdoors installation

Operating temperature:

- Cold start from -40°C (-40°F) up to +65°C (149°F)
- Running from -50°C (-58°F) up to +65°C (149°F)

Relative humidity: from 5% up to 95%

CERTIFICATIONS

Electrical safety (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1
Electromagnetic compatibility (CE): EN61000-6-4, EN61000-3-2, EN61000-3-3, EN50130-4, EN55032 (Class A)
RoHS (CE): EN IEC 63000
Outdoor installation (CE): EN60950-22, ICE60950-22
IP protection degree (EN/IEC60529): IP66, IP67, IP68 (2 hours, 5m (16ft)), IP69
Vibration test: EN50130-5, EN60068-2-6
UL certification (UL60950-1, CAN/CSA C22.2 No. 60950-1-07, UL62368-1 CAN/CSA C22.2 No. 62368-1-14): cULus Listed
Electromagnetic compatibility (North America): FCC part 15 (Class A), ICES-003 (Class A)
Level of protection Type (UL50E): 4X, 6P
RCM (Australian and New Zealand Regulatory Compliance Mark)
NDAA-compliant

CERTIFICATIONS - EXPLOSION-PROOF APPLICATIONS

ATEX (EN IEC 60079-0, EN 60079-1, EN 60079-31)
IECEX (IEC 60079-0, IEC 60079-1, IEC 60079-31)
EAC EX (TR CU 012/2011)
INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31)
UK Ex (EN IEC 60079-0, EN 60079-1, EN 60079-31)
ETL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31), cable tail versions
ETL listed for Canada (CAN/CSA-C22.2 NO. 60079-0, CAN/CSA-C22.2 NO. 60079-1, CAN/CSA-C22.2 NO. 60079-31), cable tail versions

For further details on certifications and markings, consult the relevant table.

CERTIFICATIONS - MARINE APPLICATIONS

Lloyd's Register Marine Type Approval certification (only if used with the filter accessory FM1010):

- Test Specification Number 1 (ENV1, ENV2, ENV3, ENV5)

Electromagnetic compatibility: EN60945
Salty fog resistance: EN60068-2-52
Tested at 70°C (158°F) for 16 hours in compliance with EN60068-2-2

ACCESSORIES

| | |
|------------|--|
| MBX1MAA | Explosion-proof communication box in stainless steel, IN 230Vac, with EMC filter for marine certification |
| MBX2MAA | Explosion-proof communication box in stainless steel, IN 24Vac, with EMC filter for marine certification |
| MBX3MAA | Explosion-proof communication box in stainless steel, IN 120Vac, with EMC filter for marine certification |
| MBA1SSA | Explosion-proof communication box in aluminium, IN 230Vac |
| MBA2SSA | Explosion-proof communication box in aluminium, IN 24Vac |
| MBA3SSA | Explosion-proof communication box in aluminium, IN 120Vac |
| OCTEXP3/4C | Conduit cable gland nickel-plated brass 3/4" NPT IECEX-ATEX- c CSA us - EAC Ex (operating temperature: from -60°C (-76°F) up to +80°C (+176°F)) |
| FM1010 | EMC filter for Marine certification |
| CMNS2200 | Unarmoured black cable, available by the metre (minimum order 10m (32.8ft)): 2 Ethernet cables, 3 power supply wires, 2 coaxial video cable, 15 wires for alarms, relays and telemetry |
| CMAN1300 | Armoured black cable, available by the metre (minimum order 10m (32.8ft)): 1 Ethernet cable, 3 power supply conductors, 1 coaxial video cable, 8 conductors for alarms and relay |

For further details on cable codes please refer to the relevant datasheet.

BRACKETS AND ADAPTORS

| | |
|----------|--|
| NXWBS1 | AISI 316L stainless steel wall bracket with joint |
| MHXWFWCA | AISI 316L stainless steel ball joint |
| NXFWBT | AISI 316L stainless steel parapet mounting bracket |
| NXCOL | AISI 316L stainless steel pole adapter module |
| NXCW | AISI 316L stainless steel corner adapter module |

PACKAGE

| Model Number | Weight | Dimensions (WxHxL) | Master carton |
|---------------|---------------|-------------------------|---------------|
| MVXT2HOSAZ00B | 12.5kg (28lb) | 60x30x60cm (24x12x24in) | - |

THERMAL CAMERAS (RESOLUTION 336X256)

| | Lens 9mm | | Lens 13mm | | Lens 19mm | | Lens 25mm | | Lens 35mm | | Lens 50mm | | Lens 60mm | |
|---|---|---------|---|---------|---|---------|--|---------|--|---------|--|---------|--|---------|
| | PAL | NTSC | PAL | NTSC | PAL | NTSC | PAL | NTSC | PAL | NTSC | PAL | NTSC | PAL | NTSC |
| Image Sensor | Uncooled VOx microbolometer | | Uncooled VOx microbolometer | | Uncooled VOx microbolometer | | Uncooled VOx microbolometer | | Uncooled VOx microbolometer | | Uncooled VOx microbolometer | | Uncooled VOx microbolometer | |
| Interpolated resolution | 720x576 | 720x480 | 720x576 | 720x480 | 720x576 | 720x480 | 720x576 | 720x480 | 720x576 | 720x480 | 720x576 | 720x480 | 720x576 | 720x480 |
| Pixel dimensions | 17µm | | 17µm | | 17µm | | 17µm | | 17µm | | 17µm | | 17µm | |
| Spectral response - long wave infrared (LWIR) | from 7.5µm to 13.5µm | | from 7.5µm to 13.5µm | | from 7.5µm to 13.5µm | | from 7.5µm to 13.5µm | | from 7.5µm to 13.5µm | | from 7.5µm to 13.5µm | | from 7.5µm to 13.5µm | |
| Internal shutter (only for sensor compensation) | Video stop < 1sec. | | Video stop < 1sec. | | Video stop < 1sec. | | Video stop < 1sec. | | Video stop < 1sec. | | Video stop < 1sec. | | Video stop < 1sec. | |
| Digital Detail Enhancement (DDE) | √ | | √ | | √ | | √ | | √ | | √ | | √ | |
| Digital Zoom | 2x, 4x | | 2x, 4x | | 2x, 4x | | 2x, 4x | | 2x, 4x | | 2x, 4x | | 2x, 4x | |
| Image updating frequency | 8.3fps | 7.5fps | 8.3fps | 7.5fps | 8.3fps | 7.5fps | 8.3fps | 7.5fps | 8.3fps | 7.5fps | 8.3fps | 7.5fps | 8.3fps | 7.5fps |
| Image updating high frequency | 25fps | 30fps | 25fps | 30fps | 25fps | 30fps | 25fps | 30fps | 25fps | 30fps | 25fps | 30fps | 25fps | 30fps |
| Scene range (High Gain) | -40°C ÷ +160°C (-40°F ÷ +320°F) | | -40°C ÷ +160°C (-40°F ÷ +320°F) | | -40°C ÷ +160°C (-40°F ÷ +320°F) | | -40°C ÷ +160°C (-40°F ÷ +320°F) | | -40°C ÷ +160°C (-40°F ÷ +320°F) | | -40°C ÷ +160°C (-40°F ÷ +320°F) | | -40°C ÷ +160°C (-40°F ÷ +320°F) | |
| Scene range (Low Gain) | -40°C ÷ +550°C (-40°F ÷ +1022°F) | | -40°C ÷ +550°C (-40°F ÷ +1022°F) | | -40°C ÷ +550°C (-40°F ÷ +1022°F) | | -40°C ÷ +550°C (-40°F ÷ +1022°F) | | -40°C ÷ +550°C (-40°F ÷ +1022°F) | | -40°C ÷ +550°C (-40°F ÷ +1022°F) | | -40°C ÷ +550°C (-40°F ÷ +1022°F) | |
| Horizontal field of view | 35° | | 25° | | 17° | | 13° | | 9,3° | | 6,5° | | 5,5° | |
| Vertical field of view | 27° | | 19° | | 13° | | 10° | | 7,1° | | 5° | | 4,2° | |
| F-number | F/1.25 | | F/1.25 | | F/1.25 | | F/1.1 | | F/1.2 | | F/1.2 | | F/1.25 | |
| Thermal sensitivity (NEΔT) | < 50mK at f/1.0 | | < 50mK at f/1.0 | | < 50mK at f/1.0 | | < 50mK at f/1.0 | | < 50mK at f/1.0 | | < 50mK at f/1.0 | | < 50mK at f/1.0 | |
| Person (detection / recognition / identification) | 285m / 71m / 36m (935ft / 233ft / 118ft) | | 440m / 112m / 56m (1443ft / 2368ft / 183ft) | | 640m / 160m / 80m (2099ft / 524ft / 262ft) | | 930m / 230m / 116m (3051ft / 754ft / 380ft) | | 1280m / 320m / 160m (4199ft / 1050ft / 525ft) | | 1700m / 430m / 215m (5577ft / 1410ft / 715ft) | | 2000m / 510m / 255m (6561ft / 1673ft / 836ft) | |
| Car (detection / recognition / identification) | 880m / 220m / 108m (2887ft / 722ft / 354ft) | | 1340m / 340m / 170m (4396ft / 1115ft / 557ft) | | 1950m / 500m / 250m (6397ft / 1640ft / 820ft) | | 2800m / 710m / 360m (9186ft / 2329ft / 1181ft) | | 3850m / 950m / 295m (12631ft / 3116ft / 967ft) | | 5100m / 1320m / 660m (16732ft / 4330ft / 2165ft) | | 6000m / 1560m / 780m (19685ft / 5118ft / 2559ft) | |

Only for product analogue versions.

THERMAL CAMERAS (RESOLUTION 640X512)

| | Lens 9mm | | Lens 13mm | | Lens 19mm | | Lens 25mm | | Lens 35mm | | Lens 50mm | | Lens 60mm | |
|---|---|---------|---|---------|--|---------|--|---------|--|---------|---|---------|---|---------|
| | PAL | NTSC | PAL | NTSC | PAL | NTSC | PAL | NTSC | PAL | NTSC | PAL | NTSC | PAL | NTSC |
| Image Sensor | Uncooled VOx microbolometer | | Uncooled VOx microbolometer | | Uncooled VOx microbolometer | | Uncooled VOx microbolometer | | Uncooled VOx microbolometer | | Uncooled VOx microbolometer | | Uncooled VOx microbolometer | |
| Interpolated resolution | 720x576 | 720x480 | 720x576 | 720x480 | 720x576 | 720x480 | 720x576 | 720x480 | 720x576 | 720x480 | 720x576 | 720x480 | 720x576 | 720x480 |
| Pixel dimensions | 17µm | | 17µm | | 17µm | | 17µm | | 17µm | | 17µm | | 17µm | |
| Spectral response - long wave infrared (LWIR) | from 7.5µm to 13.5µm | | from 7.5µm to 13.5µm | | from 7.5µm to 13.5µm | | from 7.5µm to 13.5µm | | from 7.5µm to 13.5µm | | from 7.5µm to 13.5µm | | from 7.5µm to 13.5µm | |
| Internal shutter (only for sensor compensation) | Video stop < 1sec. | | Video stop < 1sec. | | Video stop < 1sec. | | Video stop < 1sec. | | Video stop < 1sec. | | Video stop < 1sec. | | Video stop < 1sec. | |
| Digital Detail Enhancement (DDE) | √ | | √ | | √ | | √ | | √ | | √ | | √ | |
| Digital Zoom | 2x, 4x, 8x | | 2x, 4x, 8x | | 2x, 4x, 8x | | 2x, 4x, 8x | | 2x, 4x, 8x | | 2x, 4x, 8x | | 2x, 4x, 8x | |
| Image updating frequency | 8.3fps | 7.5fps | 8.3fps | 7.5fps | 8.3fps | 7.5fps | 8.3fps | 7.5fps | 8.3fps | 7.5fps | 8.3fps | 7.5fps | 8.3fps | 7.5fps |
| Image updating high frequency | 25fps | 30fps | 25fps | 30fps | 25fps | 30fps | 25fps | 30fps | 25fps | 30fps | 25fps | 30fps | 25fps | 30fps |
| Scene range (High Gain) | -40°C ÷ +160°C (-40°F ÷ +320°F) | | -40°C ÷ +160°C (-40°F ÷ +320°F) | | -40°C ÷ +160°C (-40°F ÷ +320°F) | | -40°C ÷ +160°C (-40°F ÷ +320°F) | | -40°C ÷ +160°C (-40°F ÷ +320°F) | | -40°C ÷ +160°C (-40°F ÷ +320°F) | | -40°C ÷ +160°C (-40°F ÷ +320°F) | |
| Scene range (Low Gain) | -40°C ÷ +550°C (-40°F ÷ +1022°F) | | -40°C ÷ +550°C (-40°F ÷ +1022°F) | | -40°C ÷ +550°C (-40°F ÷ +1022°F) | | -40°C ÷ +550°C (-40°F ÷ +1022°F) | | -40°C ÷ +550°C (-40°F ÷ +1022°F) | | -40°C ÷ +550°C (-40°F ÷ +1022°F) | | -40°C ÷ +550°C (-40°F ÷ +1022°F) | |
| Horizontal field of view | 69° | | 45° | | 32° | | 25° | | 18° | | 12.4° | | 10.4° | |
| Vertical field of view | 56° | | 37° | | 26° | | 20° | | 14° | | 9.9° | | 8.3° | |
| F-number | F/1.4 | | F/1.25 | | F/1.25 | | F/1.1 | | F/1.2 | | F/1.2 | | F/1.25 | |
| Thermal sensitivity (NEΔT) | < 50mK at f/1.0 | | < 50mK at f/1.0 | | < 50mK at f/1.0 | | < 50mK at f/1.0 | | < 50mK at f/1.0 | | < 50mK at f/1.0 | | < 50mK at f/1.0 | |
| Person (detection / recognition / identification) | 250m / 63m / 31m (820ft / 207ft / 102ft) | | 390m / 95m / 47m (1280ft / 312ft / 154ft) | | 570m / 144m / 72m (1870 / 472 / 236ft) | | 820m / 210m / 104m (2690ft / 689ft / 341ft) | | 1140m / 280m / 142m (3740ft / 919ft / 466ft) | | 1500m / 380m / 190m (4921ft / 1247ft / 623ft) | | 1750m / 450m / 225m (5741ft / 1476ft / 738ft) | |
| Car (detection / recognition / identification) | 720m / 175m / 88m (2362 / 574 / 289ft) | | 1080m / 275m / 140m (3543ft / 902ft / 459ft) | | 1550m / 400m / 200m (5085ft / 1312ft / 656ft) | | 2200m / 580m / 290m (7218ft / 1903ft / 951ft) | | 3000m / 800m / 200m (9843ft / 2625ft / 656ft) | | 3900m / 1060m / 540m (12795ft / 3478ft / 1772) | | 4500m / 1240m / 640m (14764ft / 4068ft / 2100ft) | |

Only for product analogue versions.

| THERMAL CAMERAS (RESOLUTION 336X256) | | | | | | | |
|--|---|---|--|--|--|--|--|
| Lens | 9mm | 13mm | 19mm | 25mm | 35mm | 50mm | 60mm |
| VOx microbolometer sensor not cooled | √ | √ | √ | √ | √ | √ | √ |
| Interpolated resolution | 720x480 | 720x480 | 720x480 | 720x480 | 720x480 | 720x480 | 720x480 |
| Pixel dimensions | 17μm | 17μm | 17μm | 17μm | 17μm | 17μm | 17μm |
| Spectral response - long wave infrared (LWIR) | from 7.5μm to 13.5μm | from 7.5μm to 13.5μm | from 7.5μm to 13.5μm | from 7.5μm to 13.5μm | from 7.5μm to 13.5μm | from 7.5μm to 13.5μm | from 7.5μm to 13.5μm |
| Internal shutter (only for sensor compensation) | Video stop <1s | Video stop <1s | Video stop <1s | Video stop <1s | Video stop <1s | Video stop <1s | Video stop <1s |
| Digital Detail Enhancement (DDE) | √ | √ | √ | √ | √ | √ | √ |
| Digital Zoom | 2x, 4x | 2x, 4x | 2x, 4x | 2x, 4x | 2x, 4x | 2x, 4x | 2x, 4x |
| Image updating frequency | 7.5fps | 7.5fps | 7.5fps | 7.5fps | 7.5fps | 7.5fps | 7.5fps |
| Image updating high frequency | 30fps | 30fps | 30fps | 30fps | 30fps | 30fps | 30fps |
| Scene range (High Gain) | -40°C ÷ +160°C (-40°F ÷ +320°F) | -40°C ÷ +160°C (-40°F ÷ +320°F) | -40°C ÷ +160°C (-40°F ÷ +320°F) | -40°C ÷ +160°C (-40°F ÷ +320°F) | -40°C ÷ +160°C (-40°F ÷ +320°F) | -40°C ÷ +160°C (-40°F ÷ +320°F) | -40°C ÷ +160°C (-40°F ÷ +320°F) |
| Scene range (Low Gain) | -40°C ÷ +550°C (-40°F ÷ +1022°F) | -40°C ÷ +550°C (-40°F ÷ +1022°F) | -40°C ÷ +550°C (-40°F ÷ +1022°F) | -40°C ÷ +550°C (-40°F ÷ +1022°F) | -40°C ÷ +550°C (-40°F ÷ +1022°F) | -40°C ÷ +550°C (-40°F ÷ +1022°F) | -40°C ÷ +550°C (-40°F ÷ +1022°F) |
| Horizontal field of view (HFOV) | 35° | 25° | 17° | 13° | 9.3° | 6.5° | 5.5° |
| Vertical field of view (VFOV) | 27° | 19° | 13° | 10° | 7.1° | 5° | 4.2° |
| f-number | f/1.25 | f/1.25 | f/1.25 | f/1.1 | f/1.2 | f/1.2 | f/1.25 |
| Thermal sensitivity (NETD), thermal camera with radiometric functions | <50mK at f/1.0 | <50mK at f/1.0 | <50mK at f/1.0 | <50mK at f/1.0 | <50mK at f/1.0 | <50mK at f/1.0 | <50mK at f/1.0 |
| Thermal sensitivity (NETD), thermal camera with advanced radiometric functions | <30mK at f/1.0 | <30mK at f/1.0 | <30mK at f/1.0 | <30mK at f/1.0 | <30mK at f/1.0 | <30mK at f/1.0 | <30mK at f/1.0 |
| Person (detection / recognition / identification) | 285m / 71m / 36m (935ft / 233ft / 118ft) | 440m / 112m / 56m (1443ft / 2368ft / 183ft) | 640m / 160m / 80m (2099ft / 524ft / 262ft) | 930m / 230m / 116m (3051ft / 754ft / 380ft) | 1280m / 320m / 160m (4199ft / 1050ft / 525ft) | 1700m / 430m / 215m (5577ft / 1410ft / 715ft) | 2000m / 510m / 255m (6561ft / 1673ft / 836ft) |
| Car (detection / recognition / identification) | 880m / 220m / 108m (2887ft / 722ft / 354ft) | 1340m / 340m / 170m (4396ft / 1115ft / 557ft) | 1950m / 500m / 250m (6397ft/ 1640ft / 820ft) | 2800m / 710m / 360m (9186ft / 2329ft / 1181ft) | 3850m / 950m / 295m (12631ft / 3116ft / 967ft) | 5100m / 1320m / 660m (16732ft / 4330ft / 2165ft) | 6000m / 1560m / 780m (19685ft / 5118ft / 2559ft) |

Only for the IP versions of the product.

Radiometric analysis does not affect camera performance.

| THERMAL CAMERAS (RESOLUTION 640X512) | | | | | | | |
|--|--|--|---|---|---|--|--|
| Lens | 9mm | 13mm | 19mm | 25mm | 35mm | 50mm | 60mm |
| VOx microbolometer sensor not cooled | √ | √ | √ | √ | √ | √ | √ |
| Interpolated resolution | 720x480 | 720x480 | 720x480 | 720x480 | 720x480 | 720x480 | 720x480 |
| Pixel dimensions | 17μm | 17μm | 17μm | 17μm | 17μm | 17μm | 17μm |
| Spectral response - long wave infrared (LWIR) | from 7.5μm to 13.5μm | from 7.5μm to 13.5μm | from 7.5μm to 13.5μm | from 7.5μm to 13.5μm | from 7.5μm to 13.5μm | from 7.5μm to 13.5μm | from 7.5μm to 13.5μm |
| Internal shutter (only for sensor compensation) | Video stop <1s | Video stop <1s | Video stop <1s | Video stop <1s | Video stop <1s | Video stop <1s | Video stop <1s |
| Digital Detail Enhancement (DDE) | √ | √ | √ | √ | √ | √ | √ |
| Digital Zoom | 2x, 4x, 8x | 2x, 4x, 8x | 2x, 4x, 8x | 2x, 4x, 8x | 2x, 4x, 8x | 2x, 4x, 8x | 2x, 4x, 8x |
| Image updating frequency | 7.5fps | 7.5fps | 7.5fps | 7.5fps | 7.5fps | 7.5fps | 7.5fps |
| Image updating high frequency | 30fps | 30fps | 30fps | 30fps | 30fps | 30fps | 30fps |
| Scene range (High Gain) | -40°C ÷ +160°C (-40°F ÷ +320°F) | -40°C ÷ +160°C (-40°F ÷ +320°F) | -40°C ÷ +160°C (-40°F ÷ +320°F) | -40°C ÷ +160°C (-40°F ÷ +320°F) | -40°C ÷ +160°C (-40°F ÷ +320°F) | -40°C ÷ +160°C (-40°F ÷ +320°F) | -40°C ÷ +160°C (-40°F ÷ +320°F) |
| Scene range (Low Gain) | -40°C ÷ +550°C (-40°F ÷ +1022°F) | -40°C ÷ +550°C (-40°F ÷ +1022°F) | -40°C ÷ +550°C (-40°F ÷ +1022°F) | -40°C ÷ +550°C (-40°F ÷ +1022°F) | -40°C ÷ +550°C (-40°F ÷ +1022°F) | -40°C ÷ +550°C (-40°F ÷ +1022°F) | -40°C ÷ +550°C (-40°F ÷ +1022°F) |
| Horizontal field of view (HFOV) | 69° | 45° | 32° | 25° | 18° | 12.4° | 10.4° |
| Vertical field of view (VFOV) | 56° | 37° | 26° | 20° | 14° | 9.9° | 8.3° |
| f-number | f/1.4 | f/1.25 | f/1.25 | f/1.1 | f/1.2 | f/1.2 | f/1.25 |
| Thermal sensitivity (NETD), thermal camera with radiometric functions | <50mK at f/1.0 | <50mK at f/1.0 | <50mK at f/1.0 | <50mK at f/1.0 | <50mK at f/1.0 | <50mK at f/1.0 | <50mK at f/1.0 |
| Thermal sensitivity (NETD), thermal camera with advanced radiometric functions | <30mK at f/1.0 | <30mK at f/1.0 | <30mK at f/1.0 | <30mK at f/1.0 | <30mK at f/1.0 | <30mK at f/1.0 | <30mK at f/1.0 |
| Person (detection / recognition / identification) | 250m / 63m / 31m (820ft / 207ft / 102ft) | 390m / 95m / 47m (1280ft / 312ft / 154ft) | 570m / 144m / 72m (1870 / 472 / 236ft) | 820m / 210m / 104m (2690ft / 689ft / 341ft) | 1140m / 280m / 142m (3740ft / 919ft / 466ft) | 1500m / 380m / 190m (4921ft / 1247ft / 623ft) | 1750m / 450m / 225m (5741ft / 1476ft / 738ft) |
| Car (detection / recognition / identification) | 720m / 175m / 88m (2362 / 574 / 289ft) | 1080m / 275m / 140m (3543ft / 902ft / 459ft) | 1550m / 400m / 200m (5085ft / 1312ft / 656ft) | 2200m / 580m / 290m (7218ft / 1903ft / 951ft) | 3000m / 800m / 200m (9843ft / 2625ft / 656ft) | 3900m / 1060m / 540m (12795ft / 3478ft / 1772) | 4500m / 1240m / 640m (14764ft / 4068ft / 2100ft) |

Only for the IP versions of the product.

Radiometric analysis does not affect camera performance.

MAXIMUS MVX RANGE - CERTIFICATIONS AND MARKINGS (VERSIONS WITH ARMoured CABLE)

| Certification | Marking | Ambient temperature | Cable input temperature |
|---------------|--|---------------------|-------------------------|
| ATEX | Ⓜ II 2 G Ex db IICT5 Gb Ⓜ II 2 D Ex tb IIIC T100°C Db IP66/IP68 | -60°C ≤ Ta ≤ +65°C | +80°C (+176°F) |
| | Ⓜ II 2 G Ex db IICT6 Gb Ⓜ II 2 D Ex tb IIIC T85°C Db IP66/IP68 | -60°C ≤ Ta ≤ +55°C | |
| IECEx | Ex db IICT5 Gb Ex tb IIIC T100°C Db IP66/IP68 | -60°C ≤ Ta ≤ +65°C | |
| | Ex db IICT6 Gb Ex tb IIIC T85°C Db IP66/IP68 | -60°C ≤ Ta ≤ +55°C | |
| INMETRO | Ex db IICT5 Gb Ex tb IIIC T100°C Db IP66/IP68 | -60°C ≤ Ta ≤ +65°C | |
| | Ex db IICT6 Gb Ex tb IIIC T85°C Db IP66/IP68 | -60°C ≤ Ta ≤ +55°C | |
| EAC Ex | 1Ex d IICT5 Gb X Ex tb IIIC T100°C Db X | -60°C ≤ Ta ≤ +65°C | |
| | 1Ex d IICT6 Gb X Ex tb IIIC T85°C Db X | -60°C ≤ Ta ≤ +55°C | |
| UK Ex | Ⓜ II 2 G Ex db IICT5 Gb Ⓜ II 2 D Ex tb IIIC T100°C Db IP66/IP68 | -60°C ≤ Ta ≤ +65°C | |
| | Ⓜ II 2 G Ex db IICT6 Gb Ⓜ II 2 D Ex tb IIIC T85°C Db IP66/IP68 | -60°C ≤ Ta ≤ +55°C | |

MAXIMUS MVX RANGE - CERTIFICATIONS AND MARKINGS (CABLE TAIL VERSIONS, FOR INSTALLATION WITH CONDUIT)

| Certification | Marking | Ambient temperature | Cable input temperature |
|----------------------------|---|---------------------|-------------------------|
| ATEX | Ⓜ II 2 G Ex db IICT5 Gb Ⓜ II 2 D Ex tb IIICT100°C Db IP66/IP68 | -50°C ≤ Ta ≤ +65°C | +80°C (+176°F) |
| | Ⓜ II 2 G Ex db IICT6 Gb Ⓜ II 2 D Ex tb IIICT85°C Db IP66/IP68 | -50°C ≤ Ta ≤ +55°C | |
| IECEX | Ex db IICT5 Gb Ex tb IIICT100°C Db IP66/IP68 | -50°C ≤ Ta ≤ +65°C | |
| | Ex db IICT6 Gb Ex tb IIICT85°C Db IP66/IP68 | -50°C ≤ Ta ≤ +55°C | |
| EAC Ex | 1Ex d IICT5 Gb X Ex tb IIICT100°C Db X | -50°C ≤ Ta ≤ +65°C | |
| | 1Ex d IICT6 Gb X Ex tb IIICT85°C Db X | -50°C ≤ Ta ≤ +55°C | |
| INMETRO | Ex db IICT5 Gb Ex tb IIICT100°C Db IP66/IP68 | -50°C ≤ Ta ≤ +65°C | |
| | Ex db IICT6 Gb Ex tb IIICT85°C Db IP66/IP68 | -50°C ≤ Ta ≤ +55°C | |
| KCs | Ex d IICT5 Ex tb IIICT100°C | -50°C ≤ Ta ≤ +65°C | |
| | Ex d IICT6 Ex tb IIICT85°C | -50°C ≤ Ta ≤ +55°C | |
| UK Ex | Ⓜ II 2 G Ex db IICT5 Gb Ⓜ II 2 D Ex tb IIICT100°C Db IP66/IP68 | -50°C ≤ Ta ≤ +65°C | |
| | Ⓜ II 2 G Ex db IICT6 Gb Ⓜ II 2 D Ex tb IIICT85°C Db IP66/IP68 | -50°C ≤ Ta ≤ +55°C | |
| Hazardous Location America | Class I Zone 1 AEx db IICT5 Gb Zone 21 AEx tb IIICT100°C Db Class I Div 2 Group A,B,C & D T5 Class II Div 2 Group F & G T100°C | -50°C ≤ Ta ≤ +65°C | |
| | Class I Zone 1 AEx db IICT6 Gb Zone 21 AEx tb IIICT85°C Db Class I Div 2 Group A,B,C & D T6 Class II Div 2 Group F & G T85°C | -50°C ≤ Ta ≤ +55°C | |
| Hazardous Location Canada | Ex db IICT5 Gb Ex tb IIICT100°C Db Class I Div 2 Group A,B,C & D T5 Class II Div 2 Group F & G T100°C | -50°C ≤ Ta ≤ +65°C | |
| | Ex db IICT6 Gb Ex tb IIICT85°C Db Class I Div 2 Group A,B,C & D T6 Class II Div 2 Group F & G T85°C | -50°C ≤ Ta ≤ +55°C | |

| MAXIMUS MVXT (ANALOG VERSION) - CONFIGURATION OPTIONS WITH CABLE GLAND AND ARMoured CABLE | | | | | | | | | |
|---|-----------------------------|---|----------|--|----------|--------------------------|----------|-----------|-------|
| | Voltage | Thermal camera | | Connections | | Model | | Frequency | |
| MVXT | 2 12-24Vdc/ 24Vac | Q0 Thermal camera 9mm, 336x256 | S | A Cable gland Ex d 3/4" NPT and 4m (13ft) armoured cable | 0 | 00 T5 -60°C/+65°C | A | - | 7.5Hz |
| | | M0 Thermal camera 13mm, 336x256 | | B Cable gland Ex d 3/4" NPT and 10m (32.8ft) armoured cable | | 02 T6 -60°C/+55°C | | H | 30Hz |
| | | Z0 Thermal camera 19mm, 336x256 | | | | | | | |
| | | L0 Thermal camera 25mm, 336x256 | | | | | | | |
| | | I0 Thermal camera 35mm, 336x256 | | | | | | | |
| | | J0 Thermal camera 50mm, 336x256 | | | | | | | |
| | | P0 Thermal camera 60mm, 336x256 | | | | | | | |
| | | H0 Thermal camera 9mm, 640x512 | | | | | | | |
| | | G0 Thermal camera 13mm, 640x512 | | | | | | | |
| | | U0 Thermal camera 19mm, 640x512 | | | | | | | |
| | | E0 Thermal camera 25mm, 640x512 | | | | | | | |
| | | D0 Thermal camera 35mm, 640x512 | | | | | | | |
| | | W0 Thermal camera 50mm, 640x512 | | | | | | | |
| | | K0 Thermal camera 60mm, 640x512 | | | | | | | |

Only for product analogue versions.

| MAXIMUS MVXT (ANALOG VERSION) - CONFIGURATION OPTIONS WITH CABLE TAIL (FOR INSTALLATION WITH CONDUIT) | | | | | | | | | |
|---|-----------------------------|---|----------|----------------------------------|----------|--------------------------|----------|-----------|-------|
| | Voltage | Thermal camera | | Connections | | Model | | Frequency | |
| MVXT | 2 12-24Vdc/ 24Vac | Q0 Thermal camera 9mm, 336x256 | S | F 4m (13ft) cable tail | 0 | 01 T5 -50°C/+65°C | A | - | 7.5Hz |
| | | M0 Thermal camera 13mm, 336x256 | | G 10m (32.8ft) cable tail | | 03 T6 -50°C/+55°C | | H | 30Hz |
| | | Z0 Thermal camera 19mm, 336x256 | | | | | | | |
| | | L0 Thermal camera 25mm, 336x256 | | | | | | | |
| | | I0 Thermal camera 35mm, 336x256 | | | | | | | |
| | | J0 Thermal camera 50mm, 336x256 | | | | | | | |
| | | P0 Thermal camera 60mm, 336x256 | | | | | | | |
| | | H0 Thermal camera 9mm, 640x512 | | | | | | | |
| | | G0 Thermal camera 13mm, 640x512 | | | | | | | |
| | | U0 Thermal camera 19mm, 640x512 | | | | | | | |
| | | E0 Thermal camera 25mm, 640x512 | | | | | | | |
| | | D0 Thermal camera 35mm, 640x512 | | | | | | | |
| | | W0 Thermal camera 50mm, 640x512 | | | | | | | |
| | | K0 Thermal camera 60mm, 640x512 | | | | | | | |

Only for product analogue versions.

| MAXIMUS MVXT (IP VERSION) - CONFIGURATION OPTIONS WITH CABLE GLAND AND ARMoured CABLE | | | | | | | |
|---|-----------------------------|--|---|--|-----------------------------------|------------------|--|
| | Voltage | Thermal camera | Radiometry | Connections | Model | Frequency | |
| MVXT | 2 12-24Vdc/ 24Vac | Q Thermal camera 9mm, 336x256 | O Thermal camera with radiometric functions | S A Cable gland Ex d 3/4" NPT and 4m (13ft) armoured cable | Z 00 T5 -60°C/+65°C | B - 7.5Hz | |
| | | M Thermal camera 13mm, 336x256 | R Thermal camera with advanced radiometric functions | B Cable gland Ex d 3/4" NPT and 10m (32.8ft) armoured cable | 02 T6 -60°C/+55°C | H 30Hz | |
| | | Z Thermal camera 19mm, 336x256 | | | | | |
| | | L Thermal camera 25mm, 336x256 | | | | | |
| | | I Thermal camera 35mm, 336x256 | | | | | |
| | | J Thermal camera 50mm, 336x256 | | | | | |
| | | P Thermal camera 60mm, 336x256 | | | | | |
| | | H Thermal camera 9mm, 640x512 | | | | | |
| | | G Thermal camera 13mm, 640x512 | | | | | |
| | | U Thermal camera 19mm, 640x512 | | | | | |
| | | E Thermal camera 25mm, 640x512 | | | | | |
| | | D Thermal camera 35mm, 640x512 | | | | | |
| | | W Thermal camera 50mm, 640x512 | | | | | |
| | | K Thermal camera 60mm, 640x512 | | | | | |

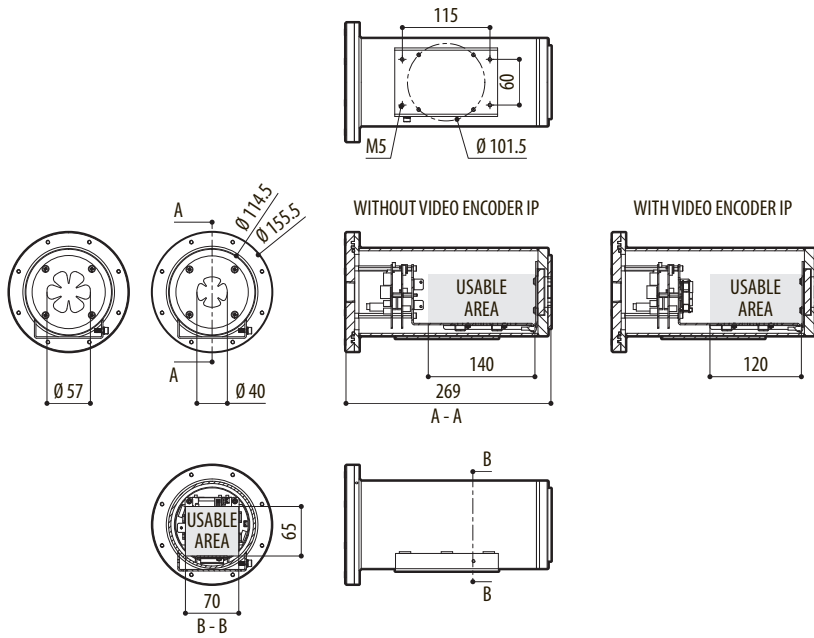
Only for the IP versions of the product.

| MAXIMUS MVXT (IP VERSION) - CONFIGURATION OPTIONS WITH CABLE TAIL (FOR INSTALLATION WITH CONDUIT) | | | | | | | | | |
|---|-----------------------------|--|---|----------|----------------------------------|----------|--------------------------|----------|---------------|
| | Voltage | Thermal camera | Radiometry | | Connections | | Model | | Frequency |
| MVXT | 2 12-24Vdc/ 24Vac | Q Thermal camera 9mm, 336x256 | O Thermal camera with radiometric functions | S | F 4m (13ft) cable tail | Z | 01 T5 -50°C/+65°C | B | - 7.5Hz |
| | | M Thermal camera 13mm, 336x256 | R Thermal camera with advanced radiometric functions | | G 10m (32.8ft) cable tail | | 03 T6 -50°C/+55°C | | H 30Hz |
| | | Z Thermal camera 19mm, 336x256 | | | | | | | |
| | | L Thermal camera 25mm, 336x256 | | | | | | | |
| | | I Thermal camera 35mm, 336x256 | | | | | | | |
| | | J Thermal camera 50mm, 336x256 | | | | | | | |
| | | P Thermal camera 60mm, 336x256 | | | | | | | |
| | | H Thermal camera 9mm, 640x512 | | | | | | | |
| | | G Thermal camera 13mm, 640x512 | | | | | | | |
| | | U Thermal camera 19mm, 640x512 | | | | | | | |
| | | E Thermal camera 25mm, 640x512 | | | | | | | |
| | | D Thermal camera 35mm, 640x512 | | | | | | | |
| | | W Thermal camera 50mm, 640x512 | | | | | | | |
| | | K Thermal camera 60mm, 640x512 | | | | | | | |

Only for the IP versions of the product.

TECHNICAL DRAWINGS

The indicated measurements are expressed in millimetres.



MAXIMUS MVXT